

AMENDMENTS TO THE CLAIMS

The claims in this listing will replace all prior versions, and listings, of claims in the application.

Claims 1-20. (Canceled)

21. (New) A modified excitation vector generator used in a CELP speech encoder/decoder, coupled to an algebraic codebook and a synthesis filter, said modified excitation vector generator comprising:

a vector providing system configured to provide an input excitation vector from said algebraic codebook;

a waveform providing system configured to provide a fixed waveform from a memory; and

a convolution system configured to convolute said fixed waveform with said input excitation vector to generate a modified excitation vector,

wherein said modified excitation vector is provided as an input to the synthesis filter.

22. (New) The excitation vector generator of claim 21, wherein said convolution system spreads an energy distribution of said input excitation vector based upon said fixed waveform over a subframe.

23. (New) The excitation vector generator of claim 22, wherein said convolution system performs a linear convolution.

24. (New) The excitation vector generator of claim 21, wherein said input excitation vector comprises a vector having a plurality of non-zero samples.

25. (New) The excitation vector generator of claim 22, wherein said waveform providing system provides a plurality of fixed waveforms.

26. (New) The excitation vector generator of claim 25, wherein said convolution system uses one of said plurality of fixed waveforms for each subframe.

27. (New) The excitation vector generator of claim 21, wherein said convolution system modifies an energy distribution of said input vector.

28. (New) A method of providing an input excitation vector used in a CELP speech encoder/decoder, coupled to an algebraic codebook and a synthesis filter, said method comprising:

providing an input excitation vector from said algebraic codebook;

providing a fixed waveform from a memory; and

convoluting said fixed waveform with said input excitation vector to generate a modified excitation vector,

wherein said modified excitation vector is provided as an input to the synthesis filter.

29. (New) The method of claim 28, wherein said input vector comprises a vector having a plurality of non-zero samples.

30. (New) The method of claim 28, wherein convoluting comprises modifying an energy distribution of the input excitation vector.